

**AMENDMENTS TO THE CLAIMS:**

Without prejudice, this listing of the claims replaces all prior versions and listings of the claims in the present application:

**LISTING OF CLAIMS:**

Claims 1 to 10. (Canceled).

11. (Previously Presented) A method for desensitizing a crystal, comprising:
  - providing the crystal having nonlinear optical properties; and
  - doping with extrinsic ions the crystal, wherein the doping of the crystal enhances the dark conductivity of the crystal, and the crystal is desensitized to damaging effects of intense exposure to light which cause light-induced variations in the refractive indices of the crystal.
12. (Previously Presented) The method as recited in claim 11, wherein the crystal is doped with protons which increase the protonic dark conductivity to a concentration of more than  $3 \times 10^{24} \text{ m}^{-3}$ .
13. (Previously Presented) The method as recited in claim 11, wherein the crystal is doped with deuterons which increase the deuteronic dark conductivity, a concentration of more than  $1 \times 10^{24} \text{ m}^{-3}$  being achieved.
14. (Previously Presented) The method as recited in claim 11, wherein the crystal is doped with ions which increase the electronic dark conductivity, a concentration of more than  $2 \times 10^{24} \text{ m}^{-3}$  being achieved.
15. (Previously Presented) The method as recited in claim 14, wherein the ions are iron ions, whose concentration reaches more than  $1 \times 10^{25} \text{ m}^{-3}$ .
16. (Previously Presented) The method as recited in claim 11, wherein the ion concentration is increased by heating the crystal in an ion-rich atmosphere.
17. (Previously Presented) The method as recited in claim 16, wherein the heating process is carried out under high pressure, in particular of over 100 bar.

18. (Previously Presented) The method as recited in claim 11 further comprising applying an electrical field to the crystal during the doping process.

19. (Previously Presented) A crystal having nonlinear optical properties comprising:  
an increased dark conductivity,  
wherein the increased dark conductivity is effected by doping the crystal with extrinsic ions, the doping of the crystal enhancing the dark conductivity of the crystal, and the crystal being desensitized to damaging effects of intense exposure to light which cause light-induced variations in the refractive indices of the crystal.

20. (Previously Presented) An optical component comprising:  
a crystal having nonlinear optical properties,  
wherein the crystal has an increased dark conductivity, and  
wherein the increased dark conductivity is effected by a doping of the crystal with extrinsic ions, the doping of the crystal enhancing the dark conductivity of the crystal, and the crystal being desensitized to damaging effects of intense exposure to light which cause light-induced variations in the refractive indices of the crystal.

21. (Previously Presented) The method of claim 11 wherein the crystal is a lithium niobate crystal.

22. (Previously Presented) The method of claim 11 wherein the crystal is a lithium tantalate crystal.

23. (Previously Presented) The method of claim 11 wherein the crystal is doped with protons which increase the protonic dark conductivity, achieving a concentration of more than  $4 \times 10^{24} \text{ m}^{-3}$ .

24. (Previously Presented) The method as recited in claim 11, wherein the crystal is doped with protons which increase the protonic dark conductivity to a concentration of more than  $4 \times 10^{24} \text{ m}^{-3}$ .